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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,002	10/17/2001	Wayne M. Barnes	60019640-0013	6531
26263 7590 05/21/2007 SONNENSCHN NATH & ROSENTHAL LLP P.O. BOX 061080 WACKER DRIVE STATION, SEARS TOWER CHICAGO, IL 60606-1080			EXAMINER FREDMAN, JEFFREY NORMAN	
			ART UNIT 1637	PAPER NUMBER
			MAIL DATE 05/21/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/981,002

Applicant(s)

BARNES, WAYNE M.

Examiner

Jeffrey Fredman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status

1. As noted previously, the current application was suspended pending the outcome of Interference I-105,320. That interference has now concluded, with priority being awarded to the opposing party, Sorge. The current party, Barnes, filed for Adverse Judgment. Therefore, the applicant is estopped from asserting prior invention relative to Sorge (see MPEP 2308.03, for example). The current rejections all involve the Sorge patent.

Priority

2. The cited priority issue is moot in view of the cancellation of the claims.

Claim Objections

3. The objection to claim 3 is moot in view of its cancellation.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(f) he did not himself invent the subject matter sought to be patented.

(g)(1) during the course of an interference conducted under section 135 or section 291, another inventor involved therein establishes, to the extent permitted in section 104, that before such person's invention thereof the invention was made by such other inventor and not abandoned, suppressed, or concealed, or (2) before such person's invention thereof, the invention was made in this country by another inventor who had not abandoned, suppressed, or concealed it. In determining priority of invention under this subsection, there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

5. Claims 17-22, 24, 26, 27, 29 and 30 are rejected under 35 U.S.C. 102(f) and (g) as being anticipated by Sorge et al (U.S. Patent 5,556,772).

Sorge teaches a kit for the synthesis of a polynucleotide, said kit comprising:

(a) a first DNA polymerase, wherein said first polymerase possesses 3'-5' exonuclease activity selected from the group consisting of Pyrococcus furiosus DNA polymerase, Thermotoga maritima DNA polymerase, Thermococcus litoralis DNA polymerase, and Pyrococcus GB-D DNA polymerase, and

(b) a second DNA polymerase, wherein said second polymerase lacks 3'-5' exonuclease activity selected from the group consisting of Thermus aquaticus DNA polymerase, (exo-) Thermococcus litoralis DNA polymerase, (exo-) Pyrococcus furiosus DNA polymerase, and (exo-) Pyrococcus GB-D DNA polymerase (see claim 1 of Sorge, which is literally identical to the current claim).

Wherein the ratio of DNA polymerase activity of the first DNA polymerase to the DNA polymerase activity of the second DNA polymerase is greater than one to one (see column 14, table 7, where ratios up to 9:1 are shown).

With regard to claim 6, Sorge teaches a method of amplifying a polynucleotide sequence, said method comprising: the steps of mixing a composition, with a synthesis primer, and a synthesis template, said composition comprising (a) a first DNA polymerase, wherein said first polymerase possesses 3'-5' exonuclease activity selected from the group consisting of Pyrococcus furiosus DNA polymerase, Thermotoga maritima DNA polymerase, Thermococcus litoralis DNA polymerase, and Pyrococcus GB-D DNA polymerase, and (b) a second DNA polymerase, wherein said second polymerase lacks 3'-5' exonuclease activity selected from the group consisting of Thermus aquaticus DNA polymerase, (exo-) Thermococcus litoralis DNA polymerase,

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(exo-) Pyrococcus furiosus DNA polymerase, and (exo-) Pyrococcus GB-D DNA polymerase (see claim 3 of Sorge). Wherein the ratio of DNA polymerase activity of the first DNA polymerase to the DNA polymerase activity of the second DNA polymerase is greater than one to one (see column 14, table 7, where ratios up to 9:1 are shown).

With regard to claims 17, 19, 20, 29, Sorge teaches a first archaebacterial DNA polymerase, Pfu polymerase (see claim 1).

With regard to claims 18, 21, 22, 24, 27, 30, Sorge teaches the use of Taq polymerase (see claim 1).

With regard to claims 26, 27, Sorge teaches the use of Thermococcus litoralis DNA polymerase and Taq polymerase (see claim 1, where Tli is the Vent DNA polymerase).

Claim Rejections - 35 USC § 103

6. The rejection of claims 23, 25, 28, 31, 33 and 36 under 35 U.S.C. 103(a) as being unpatentable over Sorge et al (U.S. Patent 5,556,772) in view of Barnes et al (WO94/26766) is withdrawn in view of the amendment.

Double Patenting

7. Claims 17-31 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-33 of copending Application No. 08/483,535. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are all drawn to methods and kits using exo+ and exo- polymerases including KlenTaq 278.

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This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Response to Arguments

9. Applicant's arguments filed May 7, 2007 have been fully considered but they are not persuasive.

Applicant's arguments were persuasive with regard to the priority issue (insofar as certain claims were denied priority) and the claim objection.

Applicant argues that the 5,556,772 is not prior art based upon proper priority. This is simply incorrect. Given the adverse judgement in Interference I-105,320, Sorge has been determined to be the prior inventor and is therefore a proper 102(f) and (g)

reference. Applicant is referred to the text of 102(f) and (g). Applicant is estopped, as per MPEP 2308.03, based upon this loss in the interference.

Applicant argues the 103 has been overcome due to the amendments and this argument is found persuasive, since the Barnes reference is no longer prior art.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Fredman whose telephone number is (571)272-0742. The examiner can normally be reached on 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on (571)272-0782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jeffrey Fredman
Primary Examiner
Art Unit 1637

5/16/09